APPENDIX A.

UNITED STATES DISTRICT COURT.

Eastern District of Wisconsin.

NATIONAL DAIRY PRODUCTS CORPORATION, *Plaintiff*, *vs.* THE BORDEN COMPANY, & HAYSSEN MANUFACTURING COMPANY;	No. 63 C 74
SAFEWAY STORES, INCORPORATED, & HAYSSEN MANUFACTURING COMPANY;	No. 63 C 113
FRIGO BROTHERS CHEESE CORPORATION, & HAYSSEN MANUFACTURING COMPANY;	No. 63 C 114
L. D. SCHREIBER & CO., INC., L. D. SCHREIBER CHEESE CO., INC., & HAYSSEN MANUFACTURING COMPANY;	No. 63 C 116
CONCORD CHEESE CORPORATION, & HAYSSEN MANUFACTURING COMPANY; *Defendants.*	No. 63 C 117

OPINION AND ORDER.

These actions arise under the patent laws of the United States, Title 35 U. S. C. A. Sections 271, 281 et seq. The parties have stipulated to jurisdiction and venue. On motion of the plaintiff, the court ordered consolidation of the suits. Consolidated trial was limited solely to the issue of the validity of the patent in suit.

Plaintiff, National Dairy Products Corporation, a Delaware corporation, has an office and place of business at 500 Pestigo Court, Chicago, Illinois. Hayssen Manufac-

turing Company, a corporation of Wisconsin, having an office at Sheboygan, Wisconsin, is a defendant in all of the actions. The Borden Company, a New Jersey corporation having an office and place of business at Plymouth, Wisconsin, is a defendant in Civil Action No. 63-C-74. Safeway Stores, Incorporated, a corporation of Maryland having an office and place of business at Green Bay, Wisconsin, is a defendant in Civil Action No. 63-C-113. Frigo Brothers Cheese Corporation, a corporation of Michigan having an office and place of business at Lena, Wisconsin, is a defendant in Civil Action No. 63-C-114. L. D. Schreiber & Co., Inc., a corporation of Delaware having an agent for service at Green Bay, Wisconsin at the time of service and, prior to May 1962, having had an office and place of business at Green Bay, Wisconsin, is a defendant in Civil Action No. 63-C-116, as is L. D. Schreiber Cheese Company, Inc., a corporation of Wisconsin having an office and place of business at Green Bay, Wisconsin. Concord Cheese Corporation, a Wisconsin corporation having an office and place of business at Fond du Lac, Wisconsin, is a defendant in Civil Action No. 63-C-117.

Plaintiff is the legal owner of the patent in suit, United States Letters Patent No. 2,919,990 (hereinafter referred to as the "Podlesak" patent). All defendants are charged with infringement of all six claims of the Podlesak patent. They join in numerous substantive and technical defenses to validity.

The Patent in Issue

The Podlesak patent, entitled "Method of Continuously Producing Packaged Units," was issued on January 5, 1960, from an application filed June 22, 1955.

According to the patent, the claimed invention relates generally to improvements in the art of packaging and

more particularly to an improved method for wrapping an article in a sealable, flexible, substantially gas and moisture-impermeable sheet material, with special application to the packaging of food products which are susceptible to mold growth.

Recited objects of the claimed invention are the provision of an improved method for semi-automatically or automatically wrapping units in flexible sheet material; the provision of a method for packaging irregularly shaped objects in such a manner that oxygen retention in voids and pockets is substantially eliminated; and the provision of a method for automatically or semi-automatically wrapping cheese units or the like in such a way that mold growth is minimized.

The Podlesak patent illustrates and describes machinery and structure for practice of the packaging method which are not claimed as invention in the patent. Practice of the method on this machinery involves disposition of the units to be packaged on a conveyor which feeds them in spaced-apart relationship onto a continuous, moving web of sealable, flexible, gas-impervious wrapping material. The web, or strip of material, moves through a forming station in which its side edges are brought together to form a tube about the units. These edges are sealed in a longitudinal seal. A gas pipe releases a preservative atmosphere inside the tube at a point located several units downstream from the forming station. The tube passes between a pair of sponge rubber rolls which squeeze it. Pressure is applied to the upper and lower surfaces of the tube and a transverse seal is made between the individual units of product. The section of tube formed by the transverse seal is then severed and the individually wrapped, severed units are disposed on an out feed conveyor.

Claim 1 of the Podlesak patent[1] discloses a combination of seven steps in the packaging method: (1) successively disposing a plurality of units to be packaged in spaced-apart relationship in an elongated tube of substantially gas impervious, flexible sheet material; (2) the tube having a single open end; (3) maintaining a plurality of units in such tube at all times; (4) continuously introducing

---

1. The claims of the patent read as follows:

"1. The method of continuously producing packaged units which comprises successively disposing a plurality of the units to be packaged in spaced-apart relationship in an elongated tube having a single open end and formed of substantially gas impervious, flexible sheet material, maintaining at all times a plurality of such units in said open ended tube, continuously introducing a preservative atmosphere into said open ended tube, and then progressively, from the non open end of said tube, collapsing said tube to reduce the volume thereof and sealing the walls of said tube together between said units to divide said tube into substantially gas-tight sections, each enclosing at least one of said units, the introduction of said preservative atmosphere and the collapsing of said tube being effective to cause a portion of said preservative atmosphere to pass over a plurality of units and out of the open end of said tube.

"2. The method of continuously producing packaged units which comprises successively disposing a plurality of the units to be packaged in spaced-apart relationship in an elongated tube having a single open end and formed of substantially gas impervious, flexible sheet material, maintaining at all times a plurality of such units in said tube, continuously introducing a preservative atmosphere into said tube, and then progressively, from the non open end of said tube, collapsing said tube to reduce the volume thereof, pressing said sheet material against said units being packaged, and sealing the walls of said tube together between said units to divide said tube into substantially gas-tight sections each enclosing at least one of said units, the introducing of said preservative atmosphere and the collapsing of said tube being effective to cause a portion of said preservative atmosphere to pass over a plurality of units and out of the open end of said tube.

"3. The method of continuously producing packaged units which comprises successively disposing a plurality of the units to be packaged in spaced-apart relationship in an elongated tube having a single open end and formed of substantially gas impervious, flexible sheet material, maintaining at all times a plurality of such units in said tube, continuously introducing a preservative atmosphere into the open end of said tube and conducting it

a preservative atmosphere into said tube; (5) progressively, from the non-open end, collapsing said tube to reduce the volume thereof; (6) sealing the walls of the tube together between the units to make substantially gas-tight sections, each enclosing at least one unit; and (7) the introduction of the preservative atmosphere and the collapsing of the tube being effective to cause a portion of the preservative atmosphere to pass over a plurality of units and out the open end of the tube.

---

to a point inwardly of a plurality of such units disposed within said tube whereupon said atmosphere is released in said tube, and then progressively, from the non-open end of said tube, collapsing said tube to reduce the volume thereof, and sealing the walls of said tube together between said units to divide said tube into substantially gas-tight sections each enclosing at least one of said units, the introducing of said preservative atmosphere and the collapsing of said tube being effective to cause a portion of said preservative atmosphere to pass over a plurality of units and out of the open end of said tube.

"4. The method of continuously producing packaged units which comprises successively disposing a plurality of the units to be packaged in spaced-apart relationship, continuously forming around said units to be packaged an elongated tube of substantially gas impervious, flexible sheet material having a single open end, continuously introducing a preservative atmosphere into the said tube and then progressively, from the non-open end of said tube, collapsing said tube to reduce the volume thereof, the collapsing of said tube taking place at a point spaced from the point of tube formation to accommodate there-between the inclusion within said tube of a plurality of units being packaged, and sealing the walls of said tube together between said units to divide said tube into substantially gas-tight sections each enclosing at least one of said units, said preservative atmosphere being introduced into the open end of said tube and being conducted to and released into said tube at a point between the point of tube formation and the point of tube collapse so as to cause a portion of said preservative atmosphere to pass over a plurality of units and out of the open end of said tube.

"5. The method of continuously producing packaged units which comprises successively disposing a plurality of the units to be packaged in spaced-apart relationship in an elongated tube having a single open end and formed of substantially gas impervious, flexible sheet material, continuously introducing a preservative gas into said tube and then progressively, from the non-open end of said tube, collapsing said tube to reduce the volume

Claim 2 adds the limitation of pressing of the sheet material of the tube against the units being packaged while the package is being made. Claim 3 calls for the gas to be released inside the tube at a point inwardly of a plurality of units in the tube; claim 4 calls for forming the tube around the units; and claim 5 requires the release of the gas at a point adjacent the point where the tube is pressed against the units and the pressing of the sheet material against the units being packaged while the package is being made.

---

thereof, the collapsing of said tube taking place at a point spaced sufficiently from said tube open end to accommodate therebetween the inclusion within said tube of a plurality of units being packaged, pressing said sheet material against said units being packaged, and sealing the walls of said tube together between said units to divide said tube into substantially gas-tight sections each enclosing at least one of said units, said preservative gas being introduced into the open end of said tube, and being conducted into said tube to a point adjacent the point at which the sheet material is pressed against the units being packaged and releasing said gas at that point whereupon a portion of said preservative gas is caused to pass over a plurality of units and out of the open end of said tube.

"6. The method of continuously producing packaged units of cheese which comprises successively disposing a plurality of the units to be packaged in spaced-apart relationship, continuously forming around said units to be packaged an elongated tube formed of substantially gas impervious, flexible sheet material having a single open end, continuously introducing into said tube a preservative gas selected from a group consisting of nitrogen, carbon dioxide and mixtures thereof, and then progressively, from the non-open end of said tube, collapsing said tube to reduce the volume thereof, the collapsing of said tube taking place at a point spaced sufficiently from said tube open end to accommodate therebetween the inclusion within said tube of a plurality of units being packaged, pressing said sheet material against said units being packaged, and sealing the walls of said tube together between said units to divide said tube into substantially gas-tight sections each enclosing at least one of said units, said preservative gas being introduced into the open end of said tube, conducted into said tube to a point adjacent the point at which said sheet material is pressed against the units being packaged, and then released, whereupon a portion of said preservative gas is caused to pass over a plurality of units and out of the open end of said tube."

Claim 6, the most limited claim, calls for all of the steps of claim 1 with these additional qualifications: the product being packaged is cheese; the tube is continuously formed around the units of cheese; the preservative gas is nitrogen, carbon dioxide or mixtures thereof; the tube is not only collapsed between the units but pressed against the units being packaged, and the gas is conducted to a point adjacent the point at which the tube is pressed against the units and there released.

According to the specifications, the tube formation may be accomplished by folding the longitudinal edges of the web or sheet of packaging material into a tube with a single, heat-sealed longitudinal seam. Further, the preservative gas may be conducted by suitable means such as a pipe or conduit into the body of the tube a distance such that several of the units being packaged are disposed between the end of the pipe from which the gas is discharged and the open end of the tube. This manner of introducing gas into the tube in combination with the collapsing of the tube causes a "diluting and a sweeping action" which reduces the content of any undesirable gas such as oxygen to a minimum.

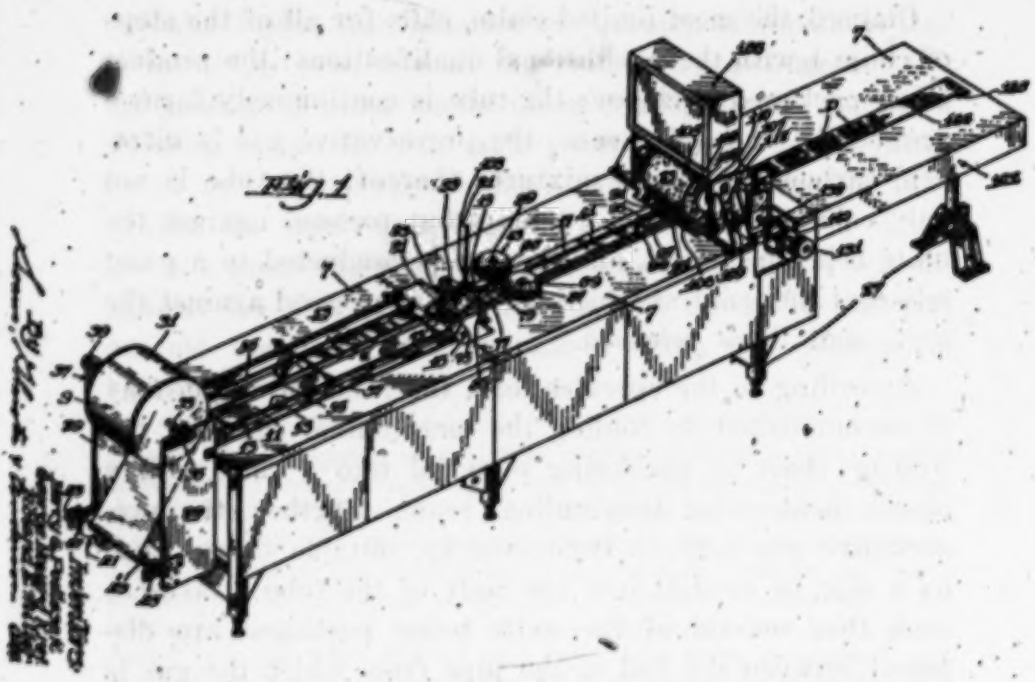

Figure 1 of the Podlesak patent, reproduced above, illustrates the basic machinery for practice of the method. It shows the forming shoe (59) for folding the wrapping material; the sealing means (63) for formation of the longitudinal seam and the formed body of the tube (17). The pipe for introducing preservative atmosphere (19) extends into the body of the formed tube (17), and may terminate at a point adjacent to the folding roller (91) and the resilient means which collapse the tube (23) by pressing the walls of the tube into intimate contact with the units of products for removal of the excess gas.

Although plaintiff claims infringement of all six claims of the Podlesak patent and defendants challenge the validity of each and every claim, claim 1 is sufficiently representative for purposes of determining the issue of validity.

Defendants attribute to the disclosures of the Podlesak claims a scope beyond that of the plain import of the claim language. This enlarged scope is derived from answers by plaintiff to various interrogatories and requests for admissions by defendants. The language of the claims is unambiguous and must be deemed the measure of the claimed invention, *Jacuil Mfrs.* v. *Batesville Casket Company*, 311 F. 2d 38, 40 (7th Cir. 1962), cert. denied 372 U. S. 942; *Binks Manufacturing Company* v. *Ransburg Electro-Coating Corporation*, 281 F. 2d 252, 256 (7th Cir. 1960), cert. dismissed 366 U. S. 211.

In summary, the gist of the claimed invention detailed above, lies in a method of continuously producing packaged units, which method consists of a combination of interacting steps whereby a flow of preservative atmosphere, traveling from the closed to the single open end of a tube of wrapping material contacts the inside surfaces of the tube and the surfaces of a plurality of units to be wrapped maintained within the tube. For brevity, but bearing in mind the essential individual steps of the method, this concept of packaging may be designated as "gas flushing." The characterization of the flow of gas as "sweeping", "scrubbing" or "repeated agitation" may add vividness to the concept and suggest the force of the flow but does not alter or enlarge the scope.

Prior Art

In the defenses to validity, defendants cite numerous items of the prior art including patents and examples of commercial use. The following examples are those deemed most pertinent.

Campbell patent No. 2,546,721 (hereinafter referred to as the "Campbell" patent), issued in March 1951, is directed to packaging machinery and a method utilizing a close-

ly fitting application of a wrapper to an object of irregular or varying size and to enhancing the keeping qualities of products by decrease of the air content within the wrapped package.

In Campbell, spaced apart units are carried onto a continuous web of wrapping material which is formed into a tube by a longitudinal lap of the margins located beneath the units to be wrapped. The longitudinal margins of the tube are sealed hermetically before a transverse seal is made on the tube with severance behind each section enclosing a unit of product. The sealed ends of the wrapper are then folded beneath each wrapped piece and sealed in place. Air is exhausted from the wrapper tube immediately prior to transverse sealing by means of a flat tube connected by a fitting with a vacuum line inserted between the lapping longitudinal margins.

Machines substantially following the disclosure of the Campbell patent were available and used commercially, beginning in the late 1940's. One model of such machines pertinent to the discussion of the prior art, which was manufactured by the Hudson-Sharp Company will be referred to hereinafter as the "Hudson-Sharp Campbell" wrapper.

Maxfield patent No. 2,160,367 (hereinafter called the "Maxfield '367" patent), issued in May 1939, relates to a method of making sealed packages utilizing a tube formed of a web of flexible material. After formation of the tube, its closure is effected at one end to form a receptacle open at its other end into which is introduced the material to be packaged. A conditioning agent for preserving the contents, such as a desired gas, may be introduced by a pipe before, and, or during the filling operation.

The receptacle is then sealed above its contents to form

an individual package, with the conditioning agent remaining within the sealed package.

From 1950 through 1954, Pauly Cheese Company, a subsidiary of Swift & Co., maintained a cheese packaging installation (hereinafter referred to as the "Swift-Pauly operation"), at its plant in Green Bay, Wisconsin. Although no pertinent contemporaneous drawings or photographs illustrating the process were offered, evidence consisting of oral testimony concerning the operation, corroborated by documentary evidence such as purchase orders, operating instructions and research notes, establishes the following details of the nature of the Swift-Pauly operations.

The packaging process was carried out on a modified Hudson-Sharp Campbell wrapper in which units of sliced, interleaved cheese were carried on a conveyor into a forming station where a strip of gas impervious, flexible wrapping material was entubed about them. The margins of the tube were closed longitudinally by a sealing mechanism located beneath the units.

After imposition of the longitudinal seal, the units within the tube of wrapping material were carried to an area where a transverse seal was applied to the tube behind each individual unit of product and where the individually wrapped section was severed from the remainder of the tube.

The precise location of the point of longitudinal sealing has not been established. It is possible that this seal was not perfected until an area closely adjacent the point where the transverse seal was imposed approximately underneath the unit of product immediately adjacent the transverse sealing mechanism. The transverse seal imposed on the tube between the units of product did not form a perfect seal across the entire width of the tube.

Just prior to passage through the transverse sealing mechanism, top pressure was applied to the tube by means of a spring loaded wiper blade which forced the tube material downward into contact with the product.

While the units were situated in the area between the tube forming station and the transverse sealing mechanism, a preservative atmosphere was introduced into the tube at a controlled rate of flow. There is testimony that the atmosphere entered the tube at right angles by a jet flow in the vicinity of the tube forming station and, also, that it was introduced by a pipe into the open end of the tube near the former and discharged from the end of the pipe within the tube at some point between the former and the collapse of the tube by transverse sealing. In either event, there was a back flow of the atmosphere under force of the action of the sealing mechanism and wiper blade from the area of the closed end of the tube, over the insides of the wrapper and the surfaces of the plurality of units of product within the tube and out the open end of the tube.

Operating instructions for the Swift-Pauly packaging process during the years 1951 and 1952 reveal this notation:

> "The production of sliced cheese with proper shelf life and freedom from mold depends upon two main factors (a) the production of the interleaved slices with as nearly zero mold contamination as possible and (b) the packaging of the slices with carbon dioxide and high vacuum in a package with good seals."

While the Swift-Pauly operation was being carried out in Green Bay, Wisconsin, employees of Swift & Co. conducted a research project relating to the development of a method for packaging cuts of cheese under vacuum in a transparent, wax-coated cellophane material with the intention of achieving an improved shelf life of the product.

Persons conducting the research project observed in July 1951 that all of the test data on keeping qualities of the cheese showed "fairly conclusively that the use of CO_2 does increase the shelf-life of our cheese." In October 1953, on the basis of tests performed in the production project, it was observed that "CO_2 content is of little importance in mold inhibition," and "(A)pparently the success of mold inhibition by reduction of the available O_2 depends on the development of a leakproof package."

In 1954, the research project turned to use of an antimycotic, sodium propionate, as a mold inhibitor to achieve satisfactory keeping quality for nationwide distribution of the cheese. This chemical process had been investigated in 1952 and was used in the study and at Swift-Pauly at least since 1953. Commercial production employing a gas flushing feature was terminated at the close of the year 1954 or very early in 1955, after the production people agreed that the use of carbon dioxide was no longer necessary in view of the availability of other appropriate, preferred mold inhibitors.

There is no proof that the Swift-Pauly operation was conducted in the manner detailed above at all times throughout the entire period from 1950 through 1954. The court finds, however, that the evidence establishes that the process of continuous packaging here described which utilized the feature of the back flow of carbon dioxide was used in commercial production of cheese during the period in question and prior to the spring of 1954.

The production at the Swift-Pauly plant was not guarded with secrecy. Although it does not appear that competitors in the cheese industry had access to observe the details of the procedure, the personnel at Swift-Pauly did not restrict outside visitors to the packaging area notwithstanding the special emphasis on avoidance of mold con-

tamination and the existence of a research project in connection with the work. Products packaged by this method were distributed commercially.

Although not relied on by defendants, another example of pertinent prior art is the Swift patent of Ingle and Nawrocki, No. 2,753,268 (hereinafter referred to as the "Ingle" patent), which issued on July 3, 1956 from an application filed July 24, 1952. The subject matter of this patent substantially corresponds to the gas, vacuum method employed in the Swift-Pauly operations conducted from 1950 through 1954. The method contemplates placing the units of cheese in an open, flexible, pliable, heat-sealable wrapper, flushing the inside of the wrapper and the surfaces of the cheese with a stream of carbon dioxide, and then applying a vacuum to the wrapper to exhaust substantially all of the carbon dioxide therefrom and heat sealing the wrapper around the cheese while under vacuum. Practice of the method of the Ingle patent could be in conjunction with any of the then known packaging methods of forming a pliable wrapping material about an article to be enclosed so as to be air-tight.

Anticipation

Various steps of the method of the Podlesak patent, singly and in combination, were old in the crowded packaging art.[2] The basic steps of a continuous, automatic or semi-automatic packaging process consisting of feeding units of products onto a strip of wrapping material in spaced apart relationship, tube formation about a plurality of units of products and collapse and sealing of the tube

2. Nine references were cited against Podlesak in the Patent Office. Defendants rely on some eleven patents as pertinent, prior art. Most of these patents either were pending or issued in the 1940's and early 1950's.

between the individual units are taught or suggested by Campbell as well as the Denison[3] and Bindszus[4] patents.

The use of inert gases such as carbon dioxide in the packaging of products susceptible of drying out or of mold formation in an atmosphere of air was known in the art for many years. Displacement of air by such gases was disclosed in the packaging process of Maxfield '367 as well as in the Nicolait[5] and Vogt[6] patents. The two later patents speak of the application as blowing the gas into direct engagement with the object, wherein the force of gas mechanically removes dust and mold spores, or replacement of air by double scrubbing with an inert gas. Additionally, the Stokes[7] patent discloses a suction pipe or nozzle which projects into a packaging tube, and the DePuy[8] patent shows the use of a nozzle for air exhaustion or introduction of inert gas into the interior of a packaging tube.

A combination of the basic continuous packaging process as in Campbell and the gas flushing principle taught by Ingle is found in the Swift-Pauly operation. The question whether or not the Swift-Pauly use furnishes invalidating anticipatory art is close. However, the court is of the opinion that the combination of Campbell and Ingle as shown in the Swift-Pauly operation did not directly anticipate the disclosure of the Podlesak patent for these reasons. The methods of Swift-Pauly and of Ingle as well as the Campbell patent are addressed to a basically different packaging concept from that of Podlesak. The gist of these methods lies in the principle of atmosphere

3. No. 2,600,216 (1952).
4. No. 2,276,282 (1942).
5. No. 1,594,794 (1926).
6. No. 2,113,636 (1938).
7. No. 2,597,041 (1952).
8. No. 2,753,671 (1956).

exhaustion in which process gas flushing is an optional or merely incidental act. Vacuuming thus constitutes more than a non-essential step unlike the act of severance of the completed package described in the Podlesak patent specifications, but not there claimed as invention.

Although the literal language of the claims of Podlesak may be read on the gas flushing portion of the Swift-Pauly operations, there is no proof that gas flushing as there practiced, without further atmosphere exhaustion, would have achieved a satisfactory packaging method. A number of features of the Swift-Pauly operations tended to prevent the efficiency of operations of the gas flushing method of Podlesak. Among these were the imperfect transverse seal to facilitate final atmosphere exhaustion, the lack of a perfect longitudinal seal to form a tube with a single open end about a plurality of units, and structural impediments to a back flow of gas from the sealed to the open end of the tube of wrapping material. The principle of gas flushing, to the extent it was followed in Swift-Pauly and disclosed in the Ingle patent, was practiced unwittingly without the realization that it could be utilized for less cumbersome, faster, less expensive and yet satisfactory packaging method. Because the success of the operation depended on vacuum packaging, not on its gas flushing aspects, there is insufficient identity of function and result to support a determination of anticipation. See *Karl Kiefer Mach. Co.* v. *United States Bottlers Machinery,* 114 F.2d 169, 172 (7th Cir. 1940); *City of Milwaukee* v. *Activated Sludge,* 69 F.2d 577, 588 (7th Cir. 1934) cert. denied 293 U. S. 576; *Straussler* v. *United States,* 339 F.2d 670, 671 (C.Cl. 1964).

Since the cheese wrapping process at Swift-Pauly is found not to constitute an anticipatory use of the method claims of Podlesak, proof of these operations does not suffice to establish invalidating prior public use under Section

102(b), Title 35 U.S.C.A. *Goodwin* v. *Borg-Warner Corporation*, 157 F.2d 267, 272 (6th Cir. 1946), cert. denied 329 U.S. 799; *Kraft Foods Co.* v. *Walther Dairy Products*, 118 F.Supp. 1, 16 (W.D. Wis. 1954), aff'd. 234 F.2d 279 (7th Cir. 1955), cert. denied 352 U.S. 926.

Obviousness

In summary, for the purpose of determining the question of obviousness of the subject matter of the Podlesak patent at the time its patentees reduced the claimed invention to practice in the spring of 1954, it was known in the art that carbon dioxide and other inert gases furnished suitable mold inhibiting atmospheres for the packaging of perishable products in available flexible, gas impervious, heat sealable wrapping materials. Packaging machinery and a process, portions of which responded to the claim language of the Podlesak patent, had been utilized commercially in the Swift-Pauly operations during a four-year period preceding the reduction to practice of the subject matter of the Podlesak patent.

Modifications of the process followed at Swift-Pauly to permit an efficient back flow of gas as in Podlesak by formation of a complete rather than interrupted transverse seal; by longitudinal sealing at a point allowing for enclosure of a plurality of units within a sealed tube having an open end; by location of release of the gas downstream of the plurality of units; and by removal of obstructions impeding the back flow of gas within the tube were simple functional expedients within the skill of any mechanic seeking to improve the force of the flow of atmosphere in the particular environment.

Overcoming the basic difference between the prior art of Swift-Pauly and the method of the Podlesak patent by eliminating the final atmosphere exhaustion of the pack-

age lies in a simple step dictated by the objective of the packaging process, that is whether or not the atmosphere was to be retained or exhausted from the individual sealed section. A packaging process wherein a preservative atmosphere was retained in the individual sealed package as in Maxfield was old in the art. Whereas, in Maxfield the introduction of the gas essentially affected only one unit of product at a time, in the Swift-Pauly operations as in the Podlesak method gas flushing of a plurality of units became part of the continuous packaging process which, to that extent, was performed automatically. Adaptation of the Swift-Pauly process to accommodate this difference necessary for the practice of the Podlesak method falls short of invention. Unlike the non-obvious modifications involved in *Continental Can Company* v. *Anchor Hocking Glass Corporation,* 362 F.2d 123, 127 (7th Cir. 1966), the adaptations required by the Podlesak method were found in the prior art.

Abandonment of the Swift-Pauly gas flushing aspects of the cheese wrapping operations is not relevant to the question of obviousness. In these operations gas flushing was merely a part of the vacuum packaging process. When a satisfactory alternative for gas flushing was developed, this was substituted. However, while the gas flushing steps were used, the application was in a manner utilizing the combination of steps called for by the claims of the Podlesak patent.

During the prosecution of the application for the Podlesak patent, the examiner rejected earlier, but substantially similar, versions of the allowed claims on the basis of obviousness in light of the gas flushing method of the Ingle patent which corresponds generally to the method of the Swift-Pauly operations. Limitations required by the examiner which called for a tube with a single open end, the maintenance of a plurality of units within the tube at

all times, continuous introduction of the atmosphere and progressive collapse of the tube from the non-open end were practiced—more or less perfectly—in the Swift-Pauly operations.

The file history does not reveal the reasoning that prompted the examiner's change of mind in ultimate allowance of the modified claims. Although teaching similar to that of the Campbell patent was before the examiner, this reference, embodying details of a continuous packaging process of particular pertinence to the method of Podlesak, was not cited. Nor was the examiner aware of the Swift-Pauly operations in which a machine manufactured under the Campbell patent was utilized for a wrapping process involving the gas flushing steps taught by Ingle. The failure to consider these pertinent examples of the prior art impairs the presumption of validity attaching to the issuance of the patent. *Simmons Company* v. *Hill-Rom Company,* 352 F.2d 886, 888 (7th Cir. 1965); *A R Inc.* v. *Electro-Voice, Incorporated,* 311 F.2d 508, 512, 513 (7th Cir. 1962); *Hobbs* v. *Wisconsin Power & Light Company,* 250 F.2d 100, 103 (7th Cir. 1957), cert. denied 356 U.S. 932.

It is the finding of the court that the combination of interacting steps of the method disclosed in all of the claims of the Podlesak patent was obvious in view of the prior art as epitomized in the operations at Swift-Pauly. In these operations persons skilled in the art of wrapping perishable products such as cheese accomplished the combination of well-known concepts and steps of the prior art in a manner substantially similar to the combination of interacting steps taught by the Podlesak claims. While, for reasons previously stated, this method has not been found to constitute a clearly anticipatory use, it nevertheless demonstrates that the subject matter of Podlesak was obvious to persons skilled in the art.

The disclosure of the claims of the Podlesak patent fails to meet the test of invention of Section 103, Title 35 U.S.C.A., as explained in *Great Atlantic & Pacific Tea Co.* v. *Supermarket Equipment Corp.*, 340 U.S. 147, 152 (1950) and *Graham* v. *John Deere Co. of Kansas City*, 383 U.S. 1, 17 (1966). See also *Zegers* v. *Zegers*, 365 F.2d 156, 159 (1966). The recent decision in *Walt Disney Productions* v. *Fred A. Niles Communications Center, Inc.*, 369 F. 2d 230 (7th Cir. decided November 9, 1966) is inapposite. In the instant case the finding of obviousness is based on evidence of the practice of a packaging method which demonstrates the combination of pertinent disclosures of the prior art of Ingle, Campbell, and Maxfield. This method was carried on commercially for the purpose of mold inhibition in a continuous automatic packaging process before the subject matter of the Podlesak patent was reduced to practice.

Invalidity under the standard of invention of Section 103, Title 35 U.S.C.A. does not depend on a showing of complete anticipation. *Pleatmaster, Inc.* v. *J. L. Golding Mfg. Co.*, 240 F.2d 894, 897 (7th Cir. 1957). The third statutory dimension of non-obviousness is independent of the tests of novelty and utility. Patentability depends upon the satisfaction of all three requirements. *United States* v. *Adams*, 383 U. S. 39, 48-52 (1966); *L & A Products, Inc.* v. *Britt Tech Corporation*, 365 F.2d 83, 85 (8th Cir. 1966).

In 1954, the cheese industry as well as various branches of the packaging industry had been engaged for many years in seeking improved methods of wrapping consumer portions of various products, particularly perishable goods such as cheese requiring particular consideration for differing types of cuts and surface characteristics. The search was for a method resulting in an attractive package and keeping qualities adequate for modern dis-

tribution and marketing conditions and, of course, for economy and speed in production.

A variety of packaging methods, including processes involving the use of antimycotics, air exhaustion, and combinations of vacuuming and gas flushing, had been in use by 1954. Although in some instances adequate shelf life and satisfactory appearance were achieved, these methods generally had the drawback that they required handling of individual units with additional costs in labor and materials. None of these methods allowed the flexibility of use for various cheese products and consumer cuts and the economy and speed of production possible under the Podlesak method. Plaintiff, by use of this method, realized substantial savings, faster production and sufficient shelf life of the product to permit elimination of local packaging plants. Although the commercial success, in part, may have been due to improvements in machinery and promotional activities, these, in turn, were occasioned by the subject matter of the method of the Podlesak patent. Not until on or about the time of the alleged infringements did the packaging industry offer machinery permitting practice of a method based on air replacement by gas atmosphere offering advantages similar to those of the Podlesak method. Giving due consideration to the impressive record of commercial success and fulfillment of a need in the industry by the subject matter of the patent in suit, the court nevertheless finds that these indicia do not overcome the lack of non-obviousness over the prior pertinent art of the Swift-Pauly operations. *Graham* v. *John Deere Co. of Kansas City*, supra, at p. 17, 18; *Corn Products Company* v. *Standard Brands, Inc.*, 359 F.2d 739, 745 (7th Cir. 1966); *Binks Manufacturing Company* v. *Ransburg Electro-Coating Corporation*, supra, at p. 256.

The limitations of narrower claims 2 through 6 do not save them from the finding of lack of non-obviousness since

there is credible evidence that the work at Swift-Pauly involved not only the general concept of the method of broad claim 1, but also utilized the restrictions of the other claims. Further, the court is of the opinion that the subject matter of the restrictions of the narrower claims merely adds detail to assure the direction and force of the flow of the preservative atmosphere which may be supplied by an informed judgment. These details would not constitute independently inventive concepts.

Technical Defenses

In view of the court's determination of invalidity for lack of non-obviousness of the subject matter of the Podlesak Patent, a resolution of the issues presented by the numerous technical defenses, although not necessary to the decision, is made for the purpose of presenting a complete record on the issues raised by the parties.

Defendants have failed to establish that plaintiff made invalidating prior public use of the subject matter of the Podlesak patent under Section 102(b), Title 35 U. S. C. A. Application for this patent was filed on June 22, 1955. The critical date, therefore, is June 22, 1954. Isolated instances of distribution of packages of cheese produced by the Podlesak method to plaintiff's personnel did not constitute a public or commercially profitable use. Although interdepartmental orders for setting up the machinery for practice of the Podlesak method had been issued as early as June 18, 1954, the orders were not carried out until June 30, 1954. An actual production trial run took place in August of 1954 and substantial commercial production commenced in September of that year.

The order to prepare machinery for commercial production at a future date does not constitute commercial exploitation as for example is found in a public disclosure

in connection with promotional sales activities prior to an actual sale of machinery to others. Compare, *George R. Churchill Company* v. *American Buff Co.*, 365 F. 2d 129, 134 (7th Cir. 1966) and *Koehring Company* v. *National Automatic Tool Company*, 362 F. 2d 100, 104 (7th Cir. 1966).

Defendants have not met the requisite burden of proof concerning the allegations of fraud in the procurement of the patent. Failure to cite pertinent prior art references may serve to impair the presumption of validity of the patent. The omission in this case, where the essential subject matter of the omitted references of Maxfield '367 and Campbell was before the examiner and where plaintiff was not shown to have knowledge of the Swift-Pauly operations may indicate an error of judgment as to pertinency, but it does not constitute fraud. Cf. *United States* v. *Standard Electric Time Company*, 155 F. Supp. 949, 952 (D. Mass. 1957), app. dismissed 254 F. 2d 598 (1st Cir. 1958).

Erroneous representations concerning the teaching of the Ingle patent did not constitute misrepresentations of the gas flushing aspects of the Ingle method which were not affected by the sequence of the vacuum steps. The examiner appears to have understood the gas flushing principle clearly before, as well as after the misstatements were made. Under these circumstances, it cannot be found that the representations were calculated to or did mislead the examiner. The defense of fraud has not been established. *Armour & Co.* v. *Wilson & Co.*, 274 F. 2d 143, 148 (7th Cir. 1960); *Hazeltine Research* v. *Avco Manufacturing Corporation*, 227 F. 2d 137, 146 (7th Cir. 1955) cert. denied 350 U. S. 987.

The doctrine of file wrapper estoppel has no application where, for purposes of determining the issue of validity, plaintiff claims a scope of invention consistent with the

plain import of the language of the allowed claims which are of equal breadth as the subject matter of those cancelled in the Patent Office. See *Hunt* v. *Armour & Co.*, 185 F. 2d 722, 727 (7th Cir. 1950) and *Esnault-Pelterie* v. *Chance Vought Corporation*, 66 F. 2d 474, 478 (2d Cir. 1933).

Additionally, defendants challenge the adequacy and sufficiency of the claim language under Section 112, Title 35 U. S. C. A. for functionalism at the point of invention, breadth of scope and indefiniteness.

The method claimed as invention in the Podlesak patent consists of the combination of interacting steps wherein a flow of atmosphere flushes the inside of the wrapping tube and the surfaces of a plurality of units disposed therein. In the description of the last act or step of this method, the claim language employs the term "caused" in specifying a result of the interaction of the other acts in the method and the direction of the flow. The claimed invention lies in the total combination of the interacting steps, that is, in the manner in which the flow is brought about in a specified environment, not merely in the final consequential act. The use of terms of effect or result in this context does not render the claim objectionable as a recitation of function at the point of invention. See *General Electric Co.* v. *Wabash Appliance Corp.*, 304 U. S. 364, 371, 372 (1938).

The failure of the claims to specify a severance step or rate of flow of the preservative atmosphere does not render the scope of the claims unduly broad or indefinite. These items do not contribute to the claimed inventive concept disclosed by the steps of the method set forth in the claims. If severance of the section enclosing a unit of product produced by the method were necessary to warrant the designation "package," this step is a mere act in support of the method and the claims would be construed as covering such an act. Section 112, Title 35 U. S. C. A.

There is no need of reciting details such as the rate of flow used in the method since this may be supplied by an exercise of judgment in adapting the process to obtain the desired result. See *Binks Manufacturing Company* v. *Ramsburg Electro-Coating Corporation,* supra, at p. 256, 257. The method of packaging called for by the claims of the Podlesak patent is operable as there described. If otherwise valid, the Podlesak patent would not be invalidated for lack of compliance with the requirements of Section 112, Title 35 U. S. C. A. See *Cutter Laboratories* v. *Lyophile Cryochem Corporation,* 179 F. 2d 80, 84 (9th Cir. 1949).

This is not a case warranting the extraordinary award of attorneys' fees under Section 285, Title 35 U. S. C. A. The record presents close questions concerning the invalidity of the patent for anticipation or for lack of non-obviousness. The technical defenses to validity have been found to be without merit.

The foregoing opinion sets forth the court's findings of fact and conclusions of law in accordance with Rule 52, Federal Rules of Civil Procedure. The clerk is hereby directed to enter orders for judgment for the defendants and for each of them,

The Borden Company
Safeway Stores, Incorporated
Hayssen Manufacturing Company
Frigo Brothers Cheese Corporation
L. D. Schreiber & Co., Inc.
L. D. Schreiber Cheese Company, Inc.
Concord Cheese Corporation

and against plaintiff, National Dairy Products Corporation, dismissing the actions and for defendants' costs.

Dated at Milwaukee, Wisconsin this 23 day of November, 1966.

/s/ K. P. Grubb,
Senior District Judge.

APPENDIX B.

IN THE UNITED STATES DISTRICT COURT OF APPEALS
For the Seventh Circuit.

No. 16149 to No. 16153 (Inclusive)

SEPTEMBER TERM, 1967 SEPTEMBER SESSION, 1967

NATIONAL DAIRY PRODUCTS CORPORATION,
Plaintiff-Appellant,

vs.

THE BORDEN COMPANY and HAYSSEN MANUFACTURING COMPANY (16149); SAFEWAY STORES, INCORPORATED, and HAYSSEN MANUFACTURING COMPANY (16150); FRIGO BROTHERS CHEESE CORPORATION and HAYSSEN MANUFACTURING COMPANY (16151); L. D. SCHREIBER & CO., INC., L. D. SCHREIBER CHEESE CO., INC., and HAYSSEN MANUFACTURING COMPANY (16152); CONCORD CHEESE CORPORATION and HAYSSEN MANUFACTURING COMPANY (16153);
Defendants-Appellees.

Appeals from the United States District Court for the Eastern District of Wisconsin.

March 26, 1968

Before HASTINGS, Chief Judge, CASTLE, and SWYGERT, Circuit Judges.

SWYGERT, *Circuit Judge.* This suit for patent infringement was brought by National Dairy Products Corporationu under Patent No. 2,919,990 (Podlesak) which was issued January 5, 1960 on an application filed June 22, 1955 by H. G. Podlesak, G. H. Kraft and R. E. Miller. These men were employees of Kraft Foods, a division of National Dairy. The patent covers a method for packaging cheese. Five defendants are cheese packagers who use the method charged to infringe. Hayssen Manufacturing Company, also a defendant, supplied machines for use in practicing the method. Separate suits filed against the individual defendants were consolidated by the district court on the question of validity. That issue alone was tried and resulted in a finding of invalidity. In a written opinion embodying his findings and conclusions, the district judge held that although Podlesak's invention was not anticipated by the prior art, it was nonetheless not patentable because the evidence submitted did not satisfy the test of nonobviousness set forth in section 103 of the Patent Act of 1952, 35 U.S.C. § 103.

The invention relates to a method for packaging separate units of cheese in a package filled with a preservative gas atmosphere which is substantially free of mold-inducing air. The method is practiced by placing multiple units of cheese in a moving tube of plastic packaging material which is sealed at its forward end and constantly flooded with preservative gas. The progressive collapsing of the packaging tube causes the gas to counter-flow or back-flush around the units and out the tube's open end, thereby "scrubbing" the surfaces of the multiple units and sweeping out the enclosed air. This method results in the units traveling into an increasing concentration of preservative gases, usually nitrogen or carbon dioxide.

As the tube is progressively collapsed over the individual units and the wrapper is cross-sealed and cut into separate packages, the cheese is enveloped by an atmosphere of the preservative gas which is substantially free of air.

The essential facts relating to the issue of validity are incorporated in an able and exhaustive opinion written by the district judge. No attack in this appeal is made with respect to those findings.[1] Plaintiffs urge the incorrectness of the judge's conclusion that the method of the patent in suit as a whole was obvious to a person having ordinary skill in the art at the time the invention was made in 1954. Likewise, our only disagreement with the district judge's decision centers on his resolution of the issue of obviousness.

In arriving at his conclusion of obviousness,[2] the district judge followed the teachings of *Graham* v. *John Deere Co.*, 383 U.S. 1 (1966). First, he determined "the scope and content of the prior art," citing Campbell patent No. 2,546,721, Maxfield patent No. 2,160,637, and Ingle-Nawrocki[3] patent No. 2,753,268, as epitomizing that art.

1. The district judge's opinion is published in 261 F. Supp. 771 (E. D. Wis. 1966). We believe that any attempt to rephrase his recitation of the essential facts would result only in supererogation.

2. The crux of the district judge's holding on the issue of obviousness follows:

> It is the finding of the court that the combination of interacting steps of the method disclosed in all of the claims of the Podlesak patent was obvious in view of the prior art as epitomized in the operations at Swift-Pauly. In these operations persons skilled in the art of wrapping perishable products such as cheese accomplished the combination of well-known concepts and steps of the prior art in a manner substantially similar to the combination of interacting steps taught by the Podlesak claims.

3. The district judge observed, "the subject matter of this patent [Ingle-Nawrocki] substantially corresponds to the gas, vacuum method employed in the Swift-Pauly operations conducted from 1950 to 1954."

Campbell '721 teaches a method for packaging *multiple units* contained in a continuous tube of wrapping material in individual, closely-fitting wrappers, the keeping qualities of which are enhanced by *exhausting the air* from the wrapper tube by means of subjecting the units to a partial vacuum prior to severance and sealing. Maxfield '367 teaches the making, filling, and sealing of containers holding *individual units,* the keeping qualities of which are enhanced by *introducing gas* into the package which is only open at one end, thereby displacing to some degree the air in the package. Ingle-Nawrocki '268 teaches a method for "placing the cheese . . . in an *open,* flexible, . . heat-sealable *wrapper,* flushing the wrapper and the surface of the cheese with a stream of carbon dioxide gas, thereafter *applying a vacuum* to said wrapper to exhaust substantially all the carbon dioxide therefrom, and heat-sealing the wrapper . . . while under said vacuum."[4] (Emphasis added.)

Second, in accordance with *John Deere,* the district judge ascertained the "differences between the prior art and the claims at issue." Viewing the Swift-Pauly work as "epitomizing the prior art," he noted the following differences between that work and the Podlesak method: (1) the efficiency of the gas flushing of Swift-Pauly was impeded by imperfect seals and structural impediments to the back flow of gas; (2) the Swift-Pauly work, embodying atmospheric exhaustion with gas flushing as only an "incidental act," was addressed to a basically different packaging concept from that of Podlesak."[5]

4. The district court also cited Nicolait patent No. 1,594,794, Vogt patent No. 2,113,636, Stokes patent No. 2,597,041, DePuy patent No. 2,753,671, Denisoh patent No. 2,600,216, and Bindszus patent No. 2,276,282. None of these patents teaches more than a step in the method ultimately patented by Podlesak.

5. These differences led the judge to conclude that Podlesak was not anticipated by the prior art.

Third, again following *John Deere*, the district judge resolved "the level of ordinary skill in the pertinent art." After enumerating the aspects of the Swift-Pauly operation which caused it to differ from Podlesak in concept, function, and result, he determined that modifications[6] of the Swift-Pauly method to reach Podlesak "were simple functional expedients within the skill of any mechanic seeking to improve the force of the flow of atmosphere in the particular environment."

We agree with both the district judge's description of the prior art and his enumeration of the differences between that art and the Podlesak method. We disagree, however, that "any mechanic" skilled in the art, even after viewing the Swift-Pauly operation in all its aspects, would readily recognize the modifications in that operation necessary to achieve Podlesak, thereby rendering the latter method obvious.

The very fact that those in charge of Swift-Pauly operations, all of whom were skilled and experienced in the art,[7] did not, after four years of work, develop the Podlesak method is strong evidence that the invention was not obvious. This evidence of nonobviousness is

---

6. The district judge listed those modifications as follows:
   (1) To permit an efficient back flow of gas as in Podlesak by formation of a complete rather than interrupted transverse seal;
   (2) By longitudinal sealing at a point allowing for enclosure of a plurality of units within a sealed tube having an open end;
   (3) By location of release of the gas downstream of the plurality of units;
   (4) By removal of obstructions impeding the back flow of gas within the tube.

7. Among the Swift-Pauly workers were Drs. Buyens and Richie, research scientists, Dr. Ingle and chemical engineer Nawrocki, the inventors of the Ingle-Nawrocki patent, and Trelease, a dairy scientist.

strengthened by the fact that the Swift-Pauly work with gas, embodied in the combination of the Ingle and Campbell teachings, was finally abandoned sometime in 1954. Despite the knowledge and skill of the Swift-Pauly workers, their experiments led them away from the Podlesak method. This movement is dramatically illustrated by the fact that shortly before the Swift-Pauly work with gas was abandoned, its researchers concluded that "CO_2 content is of little importance in mold inhibition." Moreover, not a single person skilled in the art testified that the Podlesak method was obvious at the time it was invented in 1954. The defendants' sole testimony in this regard was provided by a patent lawyer who admittedly was not an expert in the cheese packaging field.

The district judge in the course of his opinion said:

> The principle of gas flushing, to the extent it was followed in Swift-Pauly and disclosed in the Ingle patent, was *practiced unwittingly* without the realization that it could be utilized for less cumbersome, faster, less expensive and yet satisfactory packaging method. (Emphasis added.)

But such a unwitting prior use does not evidence obviousness in a later invention; in fact it indicates just the opposite. *Tilghman* v. *Proctor,* 102 U.S. 707 (1880). The Swift-Pauly workers were in pursuit of the same end result as that achieved by Podlesak—a mold-free cheese packaging method—yet they did not recognize the value of using gas alone to displace mold-inducing air. Instead, they relied on a vacuum to displace the air, using gas as an incidental aid in creating the vacuum.[8]

8. The fact that the Podlesak method combined separate steps that were old and revealed in the prior art does not negate patentability. *Copease Mfg. Co.* v. *American Photocopy Equip. Co.,* 298 F. 2d 772 (7th Cir. 1961). In addition, that no one discovered the patented method until Podlesak, though the individual steps were available for so long, is evidence of nonobviousness. *See United States* v. *Adams,* 383 U. S. 39, 51, 52 (1966).

As a primary contention advanced before this court, the defendants again seek to raise the spectre of plaintiff's "unclean hands" as a bar to any relief. In response to this same claim below, the district judge stated, "Defendants have not met the requisite burden of proof concerning the allegations of fraud in the procurement of the patent." We agree. Likewise, we are unpersuaded by the defendants' contention that the plaintiff's failure to make known to the Patent Office pertinent prior art during the prosecution of its application and the "failure of the Patent Office to cite art found to be factually pertinent" overcomes the presumption of validity. As the district judge found, the "essential subject matter" of the most pertinent of these uncited prior art references, Campbell and Maxfield '367, were before the examiner through disclosures in the cited prior art.[9]

As the Supreme Court indicated in *John Deere,* "Such secondary considerations as commercial success, long felt but unresolved needs, failure of others, . . . might be utilized . . . as indicia of obviousness or nonobviousness, . . ." 383 U. S. at 15, 16. Applying these considerations to the instant case, we observe that for a substantial period of time before 1954, the cheese industry sought improved methods of packaging to achieve an attractive product with long shelf life that could be produced efficiently at a low cost. Many methods in use by 1954, including air exhaustion, antimycotics, and combinations of vacuum and gas flushing, all required various hand operations on individual units which increased costs and reduced

9. We note that the district judge observed, "Failure to cite pertinent prior art references may serve to impair the presumption of validity." He concluded, however, that such failure "may indicate an error of judgment as to pertinency, but it does not constitute fraud." In addition, there is some indication, from notes in the file wrapper, that the examiner in fact considered and rejected Maxfield '367.

efficiency. In marked contrast to these other methods, the district court found, "Plaintiff, by use of this method, realized substantial savings, faster production and sufficient shelf life of the product to permit elimination of local packaging plants." We believe that these prior unsuccessful attempts to satisfy this long felt need in the cheese industry are strong indicia that the Podlesak method, successfully achieving aims so long sought, was not obvious. *Rex Chainbelt, Inc.* v. *General Kinematics Corp.*, 363 F. 2d 336, 337 (7th Cir. 1966). In this regard, we cannot accept defendants' contention that the commercial success of Podlesak was due primarily to improved machinery, improved packaging materials, and plaintiff's advertising. For the district court expressly found, "Although the commercial success, in part, may have been due to improvements in machinery and promotional activities, these, in turn, were occasioned by the subject matter of the method of the Podlesak patent." The worth of the Podlesak method is further indicated by its arrogation by many other cheese packagers in competition with Kraft. Such arrogation can hardly comport with a finding of obviousness.

By looking backward, after an invention has been conceived and put to practical test, the inventive-level concept may appear simple and capable of easy realization by those who are skilled in the art. This sort of view has a certain logical allurement in the instant case. Yet it must be remembered that those who combined the Campbell and Maxfield teachings, the Swift-Pauly workers, skilled as they were, did not hit upon the idea which is central to the Podlesak method. Even Podlesak and his coworkers, despite their skill in the art, conceived their idea only after months of experimentation. In these circumstances, what we said in *Zegers* v. *Zegers, Inc.*, 365 F. 2d 156, 159 (7th Cir.), *cert. denied*, 385 U. S. 948 (1966)

is pertinent, "There is no doubt, . . . that the fact that the solution to a problem is simple, or appears so, when viewed in retrospect, does not mean the solution was obvious when it was made, and that courts must guard against the exercise of hindsight in assessing the obviousness of a given improvement in the art."

The judgment is reversed.

APPENDIX C.

Section 102, Title 35 U. S. C.:

"A person shall be entitled to a patent unless—

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for patent, or

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States, or

(c) he has abandoned the invention, or

(d) the invention was first patented or caused to be patented by the applicant or his legal representatives or assigns in a foreign country prior to the date of the application for patent in this country on an application filed more than twelve months before the filing of the application in the United States, or

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or

(f) he did not himself invent the subject matter sought to be patented, or

(g) before the applicant's invention thereof the invention was made in this country by another who had not abandoned, suppressed, or concealed it. In determining priority of invention there shall be considered not only the respective dates of conception and reduction to practice of the invention, but also the reasonable diligence of one who was first to conceive and last to reduce to practice from a time prior to conception by the other."

Section 103, Title 35 U. S. C.:

> "A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made."

Rule 52(a) of the Federal Rules of Civil Procedure:

> "In all actions tried upon the facts without a jury or with an advisory jury, the court shall find the facts specially and state separately its conclusions of law thereon, and judgment shall be entered pursuant to Rule 58; and in granting or refusing interlocutory injunctions the court shall similarly set forth the findings of fact and conclusions of law which constitute the grounds of its action. Requests for findings are not necessary for purposes of review. Findings of fact shall not be set aside unless clearly erroneous, and due regard shall be given to the opportunity of the trial court to judge of the credibility of the witnesses. The findings of a master, to the extent that the court adopts them, shall be considered as the findings of the court. If an opinion or memorandum of decision is filed, it will be sufficient if the findings of fact and conclusions of law appear therein. Findings of fact and conclusions of law are unnecessary on decisions of motions under Rules 12 or 56 or any other motion except as provided in Rule 41(b)."

APPENDIX D.

Findings of Fact From the District Court's Decision Supporting Lack of Invention.

1. Claim 1 of the Podlesak patent is sufficiently representative for purposes of determining the issue of validity. (A-8.)

2. The language of the claims of the Podlesak patent is unambiguous. (A-9.)

3. The gist of the claimed invention lies in a method of continuously producing packaged units, which method consists of a combination of interacting steps whereby a flow of preservative atmosphere, traveling from the closed to the single open end of a tube of wrapping material contacts the inside surfaces of the tube and the surfaces of a plurality of units to be wrapped and maintained within the tube. (A-9.)

4. From 1950 through 1954, Pauly Cheese Company, a subsidiary of Swift & Co., maintained a cheese packaging installation ("Swift-Pauly operation"), at Green Bay, Wisconsin. The packaging process was carried out on a modified Hudson-Sharp Campbell wrapper in which units of sliced, interleaved cheese were carried on a conveyor into a forming station where a strip of gas impervious, flexible wrapping material was entubed about them. The margins of the tube were closed longitudinally by a sealing mechanism located beneath the units. After imposition of the longitudinal seal, the units within the tube of wrapping material were carried to an area where a transverse seal was applied to the tube behind each individual unit and the individually wrapped section was severed from the

remainder of the tube. The precise location of the point of longitudinal sealing was not established. The transverse seal imposed on the tube betwen the units of product did not form a perfect seal across the entire width of the tube. Just prior to passage through the transverse sealing mechanism, top pressure was applied to the tube by means of a spring loaded wiper blade which forced the tube material downward into ocntact with the product. While the units were situated in the area between the tube forming station and where the tubing was collapsed by the transverse sealing mechanism, a preservative atmosphere was introduced into the tube. There was a back flow of the atmosphere under force of the action of the sealing mechanism and wiper blade from the area of the closed end of the tube, over the insides of the wrapper and the surfaces of the plurality of units of product within the tube and out the open end of the tube. (A-11, 12.)

5. The Swift-Pauly use shows a combination of the methods taught in the Campbell and Ingle patents. (A-15.)

6. In the Campbell patent, spaced apart units are carried into a continuous web of wrapping material which is formed into a tube by longitudinal lap of the margins located beneath the units to be wrapped. The longitudinal margins of the tube are sealed hermetically before a transfer seal is made on the tube with severance behind each section enclosing a unit of product. The sealed ends of the wrapper are then folded beneath each wrapped piece and sealed in place. Air is exhausted from the wrapper tube immediately prior to transverse sealing by means of a flat tube connected by a fitting with a vacuum line inserted between the lapping longitudinal margins. (A-10.)

7. The Maxfield patent relates to a method of making sealed packages utilizing the tube formed by a web of

flexible material. After formation of the tube, its closure is effected at one end to form a receptacle open at its other end and into which is introduced the material to be packaged. A conditioning agent for preserving the contents, such as a desired gas, may be introduced by a pipe before, and, or during the filling operation. The receptacle is then sealed above its contents to form an individual package, with the conditioning agent remaining within the sealed package. (A-10, 11.)

8. The Swift-Pauly process of continuous packaging which utilized the feature of the backflow of carbon dioxide was used in commercial production of cheese for some years prior to the spring of 1954. (A-13.)

9. Various steps of the method of the Podlesak method, singly and in combination, were old in the crowded packaging art. (A-14.)

10. The question whether or not the Swift-Pauly use furnishes invalidating anticipatory art is close. (A-15.)

11. The combination of the teachings of the Campbell and Ingle patents as shown in the Swift-Pauly operation does not directly anticipate the disclosure of the Podlesak patent. The methods of Swift-Pauly and of Ingle as well as the Campbell patent address to a basically different packaging concept from that of Podlesak. The gist of these methods lies in the principle of atmospheric exhaustion and in which process gas flushing is an optional or merely incidental act. The principle of gas flushing, to the extent that it was followed in Swift-Pauly and disclosed in the Ingle patent is practiced unwittingly without the realization that it would be utilized for a less cumbersome, faster, less expensive and yet satisfactory packaging method. Because the success of the operation depended upon vacuum packaging, and not on its gas flushing aspects, there is insufficient identity of function and result to support a determination of anticipation. (A-16.)

12. Prior to the spring of 1954 it was known in the packaging art that carbon dioxide and other inert gases furnished suitable mold inhibiting atmospheres for packaging perishable products in available, flexible, gas impervious, heat sealable wrapping materials. (A-15, 17.)

13. Packaging machinery and a process, portions of which responded to the claim language of the Podlesak patent, had been utilized commercially in the Swift-Pauly operations during a 4 year period preceding the reduction to practice of the subject matter of the Podlesak patent. (A-17.)

14. The literal language of the claims of Podlesak may be read on the gas flushing portion of the Swift-Pauly operations. (A-16.)

15. Modifications of the Swift-Pauly process to permit efficient backflow of gases as in Podlesak by formation of a complete rather than interrupted transverse seal; by longitudinally sealing at a point allowing for enclosure of a plurality of units within a sealed tube having an open end; by location of release of the gas downstream of the plurality of units; and by removal of obstructions impeding the backflow of gas within the tube were simple functional expedients within the skill of any mechanic seeking to improve the force of the flow of atmosphere in the particular environment. (A-17.)

16. Overcoming the basic difference between the prior art of Swift-Pauly and the method of the Podlesak patent by eliminating the final atmospheric exhaustion of the package lies in a simple step dictated by the objective of the packaging process, that is whether or not the atmosphere was to be retained or exhausted from the individual sealed section. (A-17, 18.)

17. A packaging process wherein a preservative atmosphere was retained in the individual sealed package as in

Maxfield was old in the art. Whereas, in Maxfield the introduction of the gas essentially effected only one unit of product at a time, in the Swift-Pauly operations as in the Podlesak method, gas flushing of a plurality of units became part of the continuous packaging process which, to that extent, was performed automatically. (A-18.)

18. The combination of interacting steps of the method disclosed in all of the claims of the Podlesak patent was obvious in view of the prior art disclosed in the Ingle, Campbell and Maxfield patents as epitomized in the operations at Swift-Pauly. (A-19.)